



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Assessment and Restoration Division
c/o EPA Region X (ECL-117)
1200 Sixth Avenue
Seattle, Washington 98101

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Dear Sean:

This letter provides **NOAA's comments on the *Design Analysis Report (Conceptual 60 Percent Design Deliverable), Terminal 4 Early Action, Port of Portland, Portland, Oregon and associated documents*** prepared by Anchor Environmental, L.L.C. for the Port of Portland and dated December 2006. Comments submitted herein are limited primarily to the Design Analysis Report (DAR) and Appendix D, Water Quality Monitoring Plan. Based on discussions with the Port at the habitat mitigation meeting held in Portland on December 6, 2006, it is my understanding that the habitat mitigation plan presented in the 60 percent design is to be replaced by an updated proposal prior to submittal of the 100 percent design. I am not entirely clear on when, exactly, this proposal will be forthcoming. In any case, I do not at present intend to comment on the mitigation plan included in the 60 percent design, but I do look forward to receiving the Port's revised proposal and will provide comments as necessary at that time. Furthermore, my comments as presented do not represent a comprehensive review of the 60 percent design document. In other words, I have not carefully reviewed every section, table, appendix, and figure.

General Comments

Confined disposal facility design – the Port often refers to other CDFs, particularly those in Puget Sound, to provide support for decisions relating to the design of the CDF at T4. For example, Table 5 on page 47 (Section 5 Confined Disposal Facility Design) summarizes a number of characteristics of various CDFs, which is useful. However, as far as I can tell, no information is presented that tells us anything about the performance of these CDFs. Because I was not involved in any of these Puget Sound projects (and I suspect this is also the case for numerous other members of the project team), the inclusion of such information would be useful for obvious reasons.

Water Quality Evaluation – Appendix D provides some detail on the methodologies that will be utilized to evaluate water quality during in-water work. Compliance boundaries of 100 meters are proposed for monitoring construction work inside or outside the slips and Wheeler Bay, as well as from the CDF outfall location. A framework of tiered monitoring and schedules is also proposed for various specific components of remedial action construction work. In general, this framework entails the use of four water quality monitoring stations,



with three located on the compliance boundary (100 meters) and one located as an early warning station 50 meters from the mouth of Slip 3 or from the location of the in-water work, etc. What is not clear to me is exactly how these stations are to be used. I assume that the turnaround time for conventional parameters such as turbidity and/or dissolved oxygen is sufficient to render information collected from these stations useful. In other words, if measured parameters at an early warning station exceed threshold criteria, will the acquisition of this information enable a meaningful response that reduces adverse impacts? Given the proposed turnaround time for COC analysis is three days from the time of collection, it is not readily obvious how this information will be used. NOAA would appreciate a clear and succinct description of the rationale for these early warning stations, including a summary of how the data collected from them will be used to trigger action in a meaningful and timely way. In addition, NOAA also notes that the monitoring schedule generally calls for chemical monitoring during setup once per day for three consecutive days (Tier I). If no exceedances occur, it is proposed that chemical monitoring be scaled back to once per week (Tier II) unless a construction modification is made. NOAA is concerned that this proposed schedule does not adequately ensure that unanticipated releases of chemicals will be detected with sufficient timeliness to enable a response. Therefore, we suggest a Tier II regime that measures for chemicals of concern at least once every three days.

Specific Comments

Section 2.2.4.2, Pages 11-12. The first sentence refers to Berths 410 and 411 and references Figure 2. This Figure does not include identification tags for these berths, which would be helpful.

Section 4.2.1.1, Page 32. The second sentence states “The US EPA Action Memorandum (USEPA 2006a) defines the sediment selected for dredging at Slip 3 as “that sediment with prevalent PEC exceedances.” For purposes of clarification, it would be helpful to include here a very brief discussion of the criteria used to delineate those sediment extents with prevalent PEC exceedances, vs. those without prevalent PEC exceedances.

Section 4.2.1.1, Page 32. The fourth sentence refers to Figure 5, which shows the bulk sediment concentrations for cores located within the Slip 3 dredge prism. It follows that “A statistical interpolation model has been used to create an elevation contour surface of the DOC.” Unless I am mistaken, surface-only samples (e.g., HC and SD stations) were excluded from the model. I am not entirely clear on why this would be the case. A brief explanatory sentence would be helpful.

Section 5.2.5.1, Page 64. The last paragraph states “As can be seen on Figure 15, if 670,000 cy of in situ contaminated sediment were placed within the CDF, the top of this layer would be between 0 to – 9 feet NGVD after the import fill and cover layers were placed. This indicates that an additional 9 to 18 feet of contaminated sediment could be placed within the CDF and still be below elevation 9.5 feet NGVD.” The figure is somewhat confusing in that it provides no specific information on relative volumes of sediment. Is it possible to incorporate this information?

Section 5.2.6, Page 65, 4th paragraph. Figure 16, referenced in this paragraph, depicts a depression in the cap. As stated in the final sentence of the paragraph, the “current surface of the CDF is being designed to be pervious and minimize stormwater discharge to the Willamette River.” NOAA recognizes and appreciates the importance of minimizing stormwater discharges to the river. However, the design as currently presented will undoubtedly results in rainwater moving down and through the cap, with some portion of that volume ultimately discharging through the face of the berm. This has implications for the transport of contaminants through the face of the berm. What has been done to determine the impact of pooled rainwater moving through the CDF and out the berm relative to stormwater discharge options?

Section 5.3, Fish Removal, Page 65. This section describes efforts that will be undertaken to remove fish from within the bermed area once construction has isolated the slip from the river. What, if anything, will be done to encourage fish to leave the slip prior to initiation of construction? Please consider and discuss practicable alternatives or provide a brief explanation if no feasible options exist for chasing fish out of the slip prior to construction.

Section 7.1, Water Quality Criteria, Page 99. Table 6, referenced in the last sentence in this section, includes no acute AWQC value for total PCBs. Please note that recently updated NOAA SQUIRT Cards include an acute AWQC value for total PCBs of 2.0 ppb (See <http://response.restoration.noaa.gov/>).

Section 7.1.1.2, Ambient Background Concentrations, Page 102. The last paragraph states “Two background reference stations will be established upstream and across the river from the RAA. Both stations will be monitored during the pre-construction background survey, and *one or both* of these stations will continue to be monitored during construction to detect any excursions of ambient river conditions ... that are not caused by the Removal Action, but which may nevertheless affect water quality in the vicinity of the construction activities.” [Emphasis added.] NOAA recommends that both stations be monitored during construction. In addition, please include a reference in this paragraph to the appropriate background monitoring station location figure.

Section 7.1.1.3, Chemical Parameters, PAH Guidance Values, Page 103. This paragraph states “Aquatic life criteria for PAHs are not available in either federal or state standards. However, acute and chronic guidance values for PAHs have been developed by USEPA for use in deriving sediment quality benchmarks (USEPA 2003a). These PAH values, listed in Table 8, may be used as guidance values during the monitoring program to assess the effectiveness of construction BMPs for controlling releases of PAHs.” The EPA PAH values referred to here are first presented in Table 6, “Water Quality Criteria Guidelines”, along with acute and chronic values for other PAHs, and the source, USEPA 2003a, is referenced in the footnotes to this table. These values are apparently then carried forward to Table 8, where they appear in the bioaccumulative chemicals of concerns portion of the table. Though these chronic values for benzo(a)pyrene and chrysene are presented here, they are not referenced to USEPA 2003a, which brings me to my point: this is rather confusing and

hard to follow. Please include the reference in the footnotes to Table 8. I also suggest revising the language for the third paragraph as follows: “These PAH values, listed in *the bioaccumulative chemicals of concerns portion of* Table 8, may be used as guidance values during the monitoring program to assess the effectiveness of construction BMPs for controlling releases of PAHs.” Another point for which I would like clarification concerns the statement that these values “may” be used as guidance values to assess the effectiveness of construction BMPs for controlling releases of PAHs. I am not clear on what criteria will trigger the use of these values, or what values, if any, will be used in their stead. A brief discussion or explanation in this paragraph would be helpful.

Section 7.1.1.4, Parameters Likely to Drive Compliance, Page 104. The sentence at the top of the page states “The intensity of the chemical monitoring will vary based on activity as well as location within the project site.” While I recognize that this document contains information that may serve to clarify this statement, it is, as presented, vague in the context of this section of the document. Please consider this in the development of the 100 percent design document, and also see my comments on Appendix D.

Section 7.1.2.1, Water Quality Criteria Applicable to CDFs, Page 104. The last sentence states: “Applicable chronic criteria include National Recommended Water Quality Criteria for metals (USEPA 2006b) and PAH guidance values (USEPA 2003a) as presented in Section 7.1.1.3 and Table 8.” Please see my comments on Section 7.1.1.3 (above).

Section 7.2.6, Minimal Salmonid Exposures, Page 111. This section provides information on juvenile salmonid travel rates and suggests that, if they are present at all, individuals are not expected to remain in the area for more than one day. While this may be true, NOAA notes that juvenile Chinook salmon collected by the Lower Willamette Group in 2005 showed tissue concentrations of various contaminants that were clearly associated with sites in the vicinity of the areas where these fish were captured. This suggests that these fish were remaining in these areas for at least enough time to accumulate site-related contaminants. Hence, it is possible that fish in the area of construction could be subject to increased and potentially significant exposures to contaminants mobilized as a result of construction activities.

Sections 7.3.1 and 7.3.2, Dredging and Modified Elutriate Tests, Pages 112-113. Please ensure that tables are correctly referenced. It appears the relevant tables for these two sections are Table 9 and Table 10 for DRET and MET results, respectively. However, section 7.3.1 (DRET) refers the reader to Table 8 and section 7.3.2 (MET) refers the reader to Table 9.

Table 3, Terminal 4 Sediment Quality Guidelines, Draft Portland Harbor Screening (Level 2). For the record, NOAA does not believe that it is appropriate at this time to reference draft Portland Harbor sediment quality guidelines. In particular, NOAA rejects the proposed value for total PAHs (1,270 ppm) as not protective of aquatic resources.

Appendix D, Section 2.2, Background Survey, Pages 6-7. In the sub-section on the “Pre-Construction Survey”, it is stated that the “Background survey will consists of four sampling events” and that “five monitoring stations will be sampled during each of the background events.” The next paragraph goes on to state that “three of the five stations will be monitored only during the background survey.” The following paragraph states “the other two stations will be monitored during the background survey and, in addition, one or both of these stations will continue to be monitored during over-water and in-water work.” My understanding of these statements is that all five stations will be used to collect data during the background survey and that one or two of these stations (upstream and/or opposite river bank) will also be used to monitor construction activity. I suggest modifying the wording in these paragraphs to clarify the proposed approach and clearly present how the stations will be used. Also, is there a reason why no downstream station has been identified for the background survey? Please provide a brief explanation.

Appendix D, Section 2.6.1, Turbidity and TSS, Pages 12-13. The Port proposes using turbidity and total suspended solids, or TSS, for evaluating water quality at the compliance boundary. Page 13 lists several reasons as justification for why TSS is an acceptable surrogate for turbidity. Can the use of TSS be supported by regulatory requirements? Is there precedent for using TSS in the lower Willamette River to evaluate water quality during in-water construction? If so, how well did it perform as a surrogate for water quality?

Appendix D, Section 3.2, Pile and Structure Demolition, Page 20. The second to last bullet states “Most piles will be cut at the mudline or broken off at the mudline, which causes less disturbance than pile pulling.” Can this statement be supported with a reference? If not, can it be supported with anecdotal evidence?

Appendix D, Section 3.8, CDF Effluent Discharge, Page 20. In the subsection on the monitoring schedule for CDF effluent discharge, it is stated that “If no exceedances occur [for three days], chemical monitoring will be scaled back to once per week (Tier II).” NOAA is concerned that effluent discharges from the CDF, if they occur, carry with them a relatively high probability of chemical exceedances. Considering that any such effluent discharge will be originating from an enclosed facility containing contaminated sediments, NOAA believes the Tier I monitoring regime should be maintained at all times in the event of effluent discharge.

Appendix D, Section 3.8, CDF Effluent Discharge, Page 20. Last paragraph, the first sentence states “Additionally, a monitoring station within the CDF will be sampled when the CDF is operational ... and the ponded water elevation is such that overtopping of the weir is expected.” How often will such sampling occur? Also, please provide defined criteria for triggering monitoring within the CDF. Simply eyeballing the CDF water levels and estimating whether the weir may be overtopped is probably not sufficient.

Editorial Comments

Page 8, 4th bullet, third sentence: “*Total* Effects Concentrations” should be “*Threshold* Effects Concentrations”.

Section 6.2.1 Chemical Isolation Component, Page 89, top of page states “Two cap areas *may* require the use of organoclay supplemented cap material. The first area that *will* require the use of organoclay is located behind the bulkhead at the head of Slip 3.” [Emphasis added.] Note that the meaning of the second sentence is not consistent with the first. I believe “will” in the second sentence should be replaced with “may”.

NOAA appreciates the opportunity to provide these comments. Please let me know if you have any questions or require clarification on anything included in this letter.

Sincerely,

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NOAA Regional Resources Coordinator

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